X axis coordinate of the turning point, the coordinate of the turning point is deleted and the method proceeds to the step **500**.

[0067] In the step **400**, the self-moving robot performs traversal walking in the area between the turning point and the current obstacle point in the same walking mode as it completes traversal walking in the walking area in the step **600**.

[0068] A step **410** is further comprised after the step **400**: it is determined whether the self-moving robot can walk along the former Y-axis walking direction, if the determination result is positive, the self-moving robot walks along the former Y-axis walking direction and returns to the step **100**; and if the determination result is negative, the method proceeds to the step **500**.

[0069] The determining of whether the self-moving robot can walk along the former Y-axis walking direction in the step **400** specifically comprising:

[0070] the self-moving robot firstly walks along the former Y-axis walking direction, if the self-moving robot does not detect obstacle after walking for a certain distance, it is determined that the self-moving robot can walk along the former Y-axis walking direction; otherwise, it is determined that the self-moving robot cannot walk along the former Y-axis walking direction.

[0071] A side-looking sensor is provided on the side the self-moving robot, and the determining of whether the self-moving robot can walk along the former Y-axis walking direction in the step **400** specifically comprising: according to a feedback signal of the side-looking sensor, the self-moving robot determines whether it can walk along the former Y-axis walking direction.

[0072] As can be known from the comparison of FIG. **1** with FIGS. **2-4**, the advantage of the present invention lies in that when the self-moving robot runs into obstacle during its walking process, it can perform an one-off avoidance action with respect to obstacle by the coordinate determination so as to complete the working in each area between the periphery of the obstacle and the boundaries of the walking area; whereas in the prior art, the self-moving robot has to walk around the obstacle while avoiding obstacle for many times during its working process. Thus, the present invention accurately determines obstacle position and provides a concise walking path, and thus greatly improves the working efficiency of the self-moving robot.

1. An obstacle avoidance walking method of a self-moving robot, in a walking area of the self-moving robot, a rectangular plane coordinate system is established with the horizontal direction as the X axis and the vertical direction as the Y axis, characterized in that, the method specifically comprises the following steps:

step **100**: the self-moving robot walks along the Y axis, when the self-moving robot walks forwardly along the Y axis and detects obstacle, it sets an obstacle point at the current position as an upside obstacle point and stores valid upside obstacle points as upside recorded points; When the self-moving robot walks reversely along the Y axis and detects obstacle, it sets an obstacle point at the current position as a downside obstacle point and stores valid downside obstacle points as downside recorded points;

step **200**: according to storage sequence, the upside recorded points are classified into a current upside recorded point and previous upside recorded points, and the downside recorded points are classified into a current downside recorded point and previous downside recorded points;

step **300**: if the current obstacle point is the upside obstacle point, it is determined whether there is before the current upside obstacle point a previous upside recorded point the Y-axis coordinate of which is less than that of the current upside obstacle point; and if the current obstacle point is the downside obstacle point, it is determined whether there is before the current downside obstacle point a previous downside recorded point, the Y-axis coordinate of which is larger than that of the current downside obstacle point;

step **400**: if the determination result is positive, the previous upside recorded point or the previous downside recorded point is a turning point, the self-moving robot walks along the X axis from the current obstacle point toward the turning point to the X-axis coordinate of the turning point, deletes the coordinate of the turning point, and returns to the step **100** after completing traversal walking in an area between the turning point and the current obstacle point; and if the determination result is negative, the self-moving robot moves for a displacement M**1** along the X axis;

step **500**: the self-moving robot walks along a direction opposite to the former Y-axis walking direction, and returns to the step **100**;

step **600**: the step **100** to the step **500** are repeated until traversal walking in the walking area is completed.

2. The obstacle avoidance walking method of the self-moving robot of claim **1**, characterized in that, the step **100** specifically further comprises:

if the Y-axis coordinate of the current upside obstacle point is different from that of each of the previous upside recorded points, the current upside obstacle point is the valid upside Obstacle point; and if the Y-axis coordinate of the current downside obstacle point is different from that of each of the previous downside recorded points, the current downside obstacle point is the valid downside obstacle point.

3. The Obstacle avoidance walking method of the self-moving robot of claim **1**, characterized in that, the step **100** specifically further comprises:

each of the upside obstacle points is the valid upside obstacle point; and each of the downside obstacle points is the valid downside obstacle point.

4. The obstacle avoidance walking method of the self-moving robot of claim **3**, characterized in that, the step **400** specifically further comprises:

if the determination result is positive, difference values of the X-axis coordinates of all of the upside recorded points or the downside recorded points that satisfy the determination condition from the X-axis coordinate of the current obstacle point are compared, and the upside recorded point or the downside recorded point having the largest difference value is taken as the turning point.

5. The obstacle avoidance walking method of the self-moving robot of claim **4**, characterized in that, the step **400** specifically further comprises:

if the determination result is positive, the coordinates of all of the upside recorded points or the downside recorded points that satisfy the determination condition are deleted.